

GARDNER--MACKINAW MINE.

Some ore was shipped from the Gardner stockpile during the summer.

The following statement shows the ore shipped in 1923, and the ore in stock on January 1st, 1924:

	<u>SHIPMENTS</u>	<u>IN STOCK JANUARY 1, 1924</u>
Gardner,	5,370	1,557
Gardner High Sulphur,	<u>4,894</u>	<u>42,880</u>
Total Gardner Mine,	10,264	44,437
Mackinaw High Sulphur,	<u>0</u>	<u>6,125</u>
GRAND TOTAL,	10,264	50,562

During the summer, the water storage tank at the mine was kept filled with water to provide fire protection for the mine and location. The electric pump was kept in commission on surface at the mine so that in case of fire water could be pumped directly into the water lines at the mine, as also the water line from the mine to the location. A plowed strip, 18 feet in width, extending entirely around the location, was kept free of grass and brush during the summer months, to provide protection from forest fires on the sand plains.

The last of April, the pumpman noticed that the timber on the plat at the 4th Level of the Mackinaw shaft was in bad condition. A shift boss and three miners were sent to the mine and worked for about two weeks, installing new timber on the 4th Level plat and at various places throughout the mine, where repairs were needed. The ventilation in the mine is good, but as is the case in all idle mines, there is no appreciable movement of air during the summer months and the mine timber rots.

In November, it was decided to stop pumping at this property and let the mine fill with water. Due to the fact that the ore here is hard and there is comparatively little timber in the mine, it was thought that there would be no damage if it were allowed to fill with water. The average in-

coming water is less than 100 gallons per minute, so that there would be comparatively little difficulty in unwatering the property. Owing to the acid in the mine water it was considered advisable to remove the main pump on the 4th Level, Mackinaw Mine, also the motor cars, haulage locomotive, and electric cables, all of which might be seriously damaged if left under water for several years.

All loose timber and lagging were cleaned off the levels and some fifty props put in the timbered drifts where there might be danger of the ground caving, after the water was pumped out again. A crew of twelve men were employed here for several weeks removing the equipment and storing it on surface. Several of the motor cars and one motor were on the 1st Level, Gardner Mine, and these were hoisted through the Gardner shaft. The electric equipment had been taken from the Gardner hoist in 1922, and sent to the Stephenson Mine, so that in order to hoist from the Gardner shaft, it was necessary to install a temporary sheave at the Mackinaw and one at the Gardner, and extend the Mackinaw rope line to the Gardner, and use the hoist at the Mackinaw engine house. This increased the cost of removing the equipment.

The 1000-gallon plunger pump was removed from the mine; the small plunger pump of 200-gallon capacity, 1000-ft. head, on the 5th Level, was operated during the time that the large pump was being removed. The motor and gear of the small pump were then taken out of the mine, the balance of this pump being left underground. It was given a heavy coating of grease and oil, and it is not thought that it will be seriously damaged by being left in the mine under water. When the mine is unwatered it will only require a short time to install the pump motor and other electric equipment, as also the gear, so that this pump can be quickly gotten into operating condition again.

It was figured that the cost of getting the mine in condition to fill with water, and unwatering it again, assuming that it would be idle for at least the next four or five years, would be considerably less than the cost of keeping it pumped out. It was also figured that there would be less rotting of timber and no expense for keeping the levels in repair.

GARDNER-MACKINAW MINE

AVERAGE MINE ANALYSIS ON OUTPUT FOR YEAR 1923.

GRADE	IRON	PHOS.	SILICA	MANG.	SULPH.
Gardner,			(No Production)		
Gardner High Sulphur,			(No Production)		
Mackinaw,			(No Production)		
Mackinaw High Sulphur,			(No Production)		

AVERAGE ANALYSIS ON STRAIGHT CARGOES FOR YEAR 1923.

GRADE	IRON	PHOS.	Mine SILICA	MANG.	SULPH.
Gardner,			(All Mixed)		
Gardner-High Sulphur,			(All Mixed)		
Mackinaw,			(No Shipments)		
Mackinaw High Sulphur,			(All Mixed)		

ORE STATEMENT - DECEMBER 31ST, 1923.

	GARDNER HIGH SULPHUR	MACKINAW HIGH SULPHUR	TOTAL	TOTAL LAST YEAR
On hand Jan. 1, 1923,	6,927	47,774	6,125	101,006
Output for Year,	-	-	-	-
Total,	6,927	47,774	6,125	101,006
Shipments,	5,370	4,894	-	40,180
Balance on Hand,	1,557	42,880	6,125	60,826
Decrease in Ore on Hand,				10,264

1923 -- Mine Idle during Year.

1922 -- Mine Idle during Year.

GARDNER-MACKINAW MINE
SHIPMENTS FOR YEAR-1923

GRADE	POCKET	STOCKPILE	TOTAL	TOTAL LAST YEAR
Gardner,	-	5,370	5,370	21,217
Gardner High Sulphur,	-	4,894	4,894	680
Mackinaw,	-	-	-	-
Mackinaw High Sulphur,	-	-	-	18,283
Total,	-	10,264	10,264	40,180
Total Last Year,	-	40,180	40,180	
Decrease,			29,916	

GARDNER-MACKINAW MINE

COMPARATIVE WAGES AND PRODUCT

	1 9 2 3	1 9 2 2	INCREASE	DECREASE
PRODUCT	-	-		
No.Shifts & Hours				
Avg.No.MEN WORKING				
Surface	3	3		
Underground	2	3		1
Total	5	6		1
AVG.WAGES PER DAY				
Surface	4.10	3.49	.61-17.48%	
Underground	4.23	3.78	.45-11.9%	
Total	4.12	3.62	.50-13.8%	
WAGES PER MO. OF 25 DAYS				
Surface	102.50	88.25	14.25	
Underground	105.75	94.50	11.25	
Total	103.00	90.50	12.50	
PRODUCT PER MAN PER DAY				
Surface				
Underground				
Total				
LABOR COST PER TON				
Surface				
Underground				
Total				
AVG.PRODUCT BRK'G & TRM'G				
" WAGES CONTRACT MINERS				
" " " TRAMMERS				
TOTAL NO.OF DAYS				
Surface	1,081 $\frac{1}{4}$	836	245 $\frac{1}{4}$	
Underground	788 $\frac{3}{4}$	732- $\frac{3}{4}$	55- $\frac{3}{4}$	
Total	1,869- $\frac{3}{4}$	1,568- $\frac{3}{4}$	301	
AMOUNT FOR LABOR				
Surface	4435.06	2915.27	1519.79	
Underground	3335.23	2766.12	569.11	
Total	7770.29	5681.39	2088.90	

Proportion Surface to Underground Men:

1923 - 1 to .67
 1922 - 1 to 1
 1921 - 1 to 2
 1920 - 1 to 3.3
 1919 - 1 to 3.

Mine idle since Nov.30, 1920.